

# FINAL REPORT

Marine Endangered Species Monitoring Program  
Weeks Marine, Inc.  
Galveston District

Maintenance Project  
Houston Harbor Ship Channel, Texas

Dates: 13 May- 11 August 2003



Submitted by:

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## ABSTRACT

A twenty-four hour per day marine endangered species monitoring program was conducted onboard both the hopper dredge *B.E. Linkholm* (13 May through 11 August 2003) and *R.N. Weeks* (05 June 02 August 2003) during the Houston Harbor Ship Channel maintenance project. Endangered and threatened sea turtles *Caretta caretta* (loggerhead), *Chelonia mydas* (green), *Lepidochelys kempii* (Kemp's ridley), *Dermochelys coriacea* (leatherback) and *Eretmochelys imbricata* (hawksbill) were the species targeted. One take was recorded; a whole *Lepidochelys kempii* (Kemp's ridley) recovered.

## INTRODUCTION

The [REMSA Inc.](#) Marine Endangered Species Observer Division was subcontracted by *Weeks Marine, Inc.* in the Galveston District to monitor the impact of dredging on endangered sea turtle species in the area of the dredge operation. Pursuant to agreements with the National Marine Fisheries Service (NMFS), four certified observers, two on each dredge were required onboard during the months of prime sea turtle activity for that area to document any detected incidents involving target species.

## SCOPE OF WORK

[REMSA](#) provided the necessary trained personnel and equipment to clean and monitor inflow screens onboard the hopper dredges *B.E. Lindholm* and *R.N. Weeks* for the necessary reports. Monitoring was performed 24 hours each day starting with the dredge *B.E. Lindholm* (13 May through 11 August 2003) along with the Dredge *R.N. Weeks* (05 June through 02 August 2003) to complete the beach replenishment project. Observers inspected and cleaned all inflow and overflow screens, and inspected both dragheads each time they were brought on deck for cleaning and maintenance. Any death or injury involving target species, the loggerhead turtle (*Caretta caretta*), green turtle (*Chelonia mydas*), Kemp's ridley turtle (*Lepidochelys kempii*), leatherback turtle (*Dermochelys coriacea*), and hawksbill turtle (*Eretmochelys imbricata*) were to be identified, logged, measured, and photographed. Disposal of any animals recovered was the responsibility of the observer and dredge personnel. A load sheet was completed for each load whether or not turtle parts were found. In the case of an incident or take involving a sea turtle, incident report forms were to be completed and the observers are to contact NMFS and the COE within twenty-four hours of the incident. Daylight bridge watch was conducted during periods when the observer was not occupied with screen cleaning duties. Observers ensured that dredge crew personnel were aware of the need to avoid incidents involving any endangered animal, and that civil and criminal penalties are possible for harming or harassing endangered species.

## METHODS

Dredge coverage began when the observers arrived onboard the *B.E. Lindholm* (13 May through 11 August 2003) and the *R.N. Weeks* (05 June through 02 August 2003) in Houston, TX. Two certified observers were present during prime sea turtle activity working 12 hour shifts.

Both Dredges *B.E. Lindholm* and *R.N. Weeks* functioned with 100% inflow screening with sea turtle draghead deflectors being used. The screening baskets were fitted with

4" x 4" screening material to insure that parts of targeted species would not be allowed to flow through into the hopper. All dragheads and screening baskets were checked after each load of the observers 12-hour shift. The appropriate forms were filled out, noting any incidents regarding targeted species as well as the marine life present in the inflow and overflow boxes.

A bridge lookout was maintained during those daylight hours that the observer was not on deck checking screens. Watch was kept for turtles in the dredging area and dump site.

## RESULTS

There was one reported incident during the project period. The incident was identified as a whole Kemp's ridley (*Lepidochelys kempii*) taken by the *B.E. Lindholm* on load #465. The fragment was reported to be fresh. Proper incident reports were completed and faxed to NMFS (Appendix 1). The specimen and a copy of the incident report were turned in to COE personnel for transport to NMFS lab for further evaluation and tissue sampling.

The mean sea temperature during this period averaged fourteen 14 ° Celsius with a fluctuation of +/- 2°C. Many pods of bottlenose dolphin (*Tursiops truncatus*) were spotted throughout the bridge watches and were noted in the daily reports. Due to the nature of the material being dredged, this project possessed an abundance of large rocks and biological species. All species were identified and recorded in daily report sheets to provide information for biological by-catch in the surrounding area.

### Incident #1

Houston Ship Channel, Texas

19 July 2003

*Lepidochelys kempii*



## SUMMARY

On 13 May 2003, the hopper dredge *B.E. Lindholm* began dredging in Houston Ship Channel, Texas along with the dredge *R.N. Weeks* on 05 June 2003. Dredging was conducted for a total of eighty-five days with a total of 546 loads between the two dredges, *B.E. Lindholm* (353) and *R.N. Weeks* (192). On 19 July 2003, the observer on the dredge *B.E. Lindholm* reported an incident in which a whole sea turtle was found. The specimen found was a Kemp's Ridley (*Lepidochelys kempii*). Information was recorded and copies were made for Weeks Marine, NMFS, and COE.

Many pods of bottlenose dolphin (*Tursiops truncatus*) were spotted throughout the bridge watches and were noted in the daily reports along with the biological by-catch.

If there are any questions regarding this report please feel free to contact me at the number below.

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## **Appendix 1**

### **Sea Turtle Incident Reports**

# ENDANGERED SPECIES OBSERVER PROGRAM

Project: Houston-Galveston Shipping Channel, TX

## INCIDENT REPORT OF SEA TURTLE TAKE BY DREDGING ACTIVITY

Date 19 July 2003

Time(24hr) 1600

Species of Turtle Taken Lepidochelys kempi (Kemp's Ridley)

Dredging Site (channel, port, etc.) channel

Location of Take: Latitude 29°30N

Longitude 94°52W

Vessel Name and Company BE Lindholm, Weeks Marine

Type of Dredging Activity maintenance + deepening

Load # 465

Times: Start 1028

End 1314

Dump 1523

Sampling Method (overflow, inflow, etc.) overflow + inflow

Samples Recovered From port overboard discharge basket

Condition of Screening good

Draghead Deflector? Yes X No     

Condition of Deflector good

Weather Conditions 84°, partly cloudy, calm seas, 5-10 kt wind Tide Flood

Water Temperature: Surface 30°

Column 29°

C or F (circle one)

Condition of Specimen(s) Sampled Entire turtle recovered with mild abrasions on carapace, plastron, head and marginal scutes. Some bleeding evident in soft tissues of neck and flippers. Photos taken (#23-27)

### Measurements--

Give estimate of entire carapace dimensions, as well as fragments sampled (in metric when possible, indicate if not)

Head Width 7 cm

Plastron Length 23 cm

Width 27 cm

Carapace S. L. Length     

S.L. Width     

Carapace O.C. Length 29 cm

O.C. Width 30.5 cm

Turtle Tagged? Yes      No ✓

Tag #     

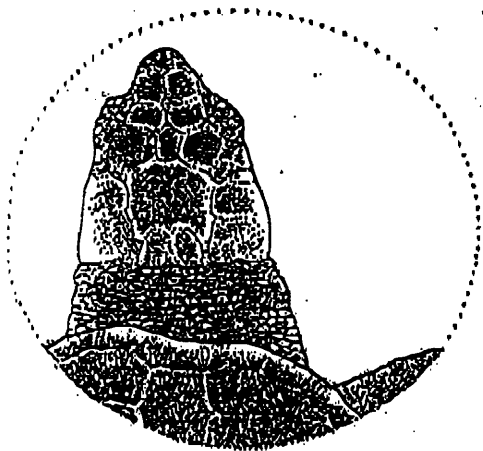
Tag Date 1 / 1

Comments Capt. Aray, Brett Dupuis, ACOE and REMA notified of take.

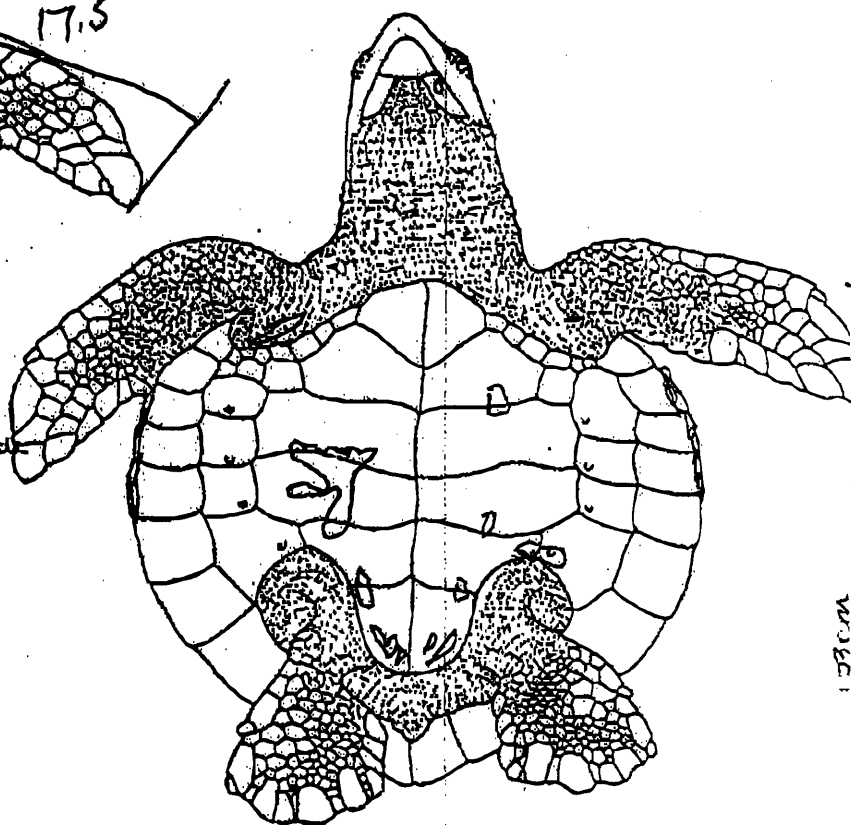
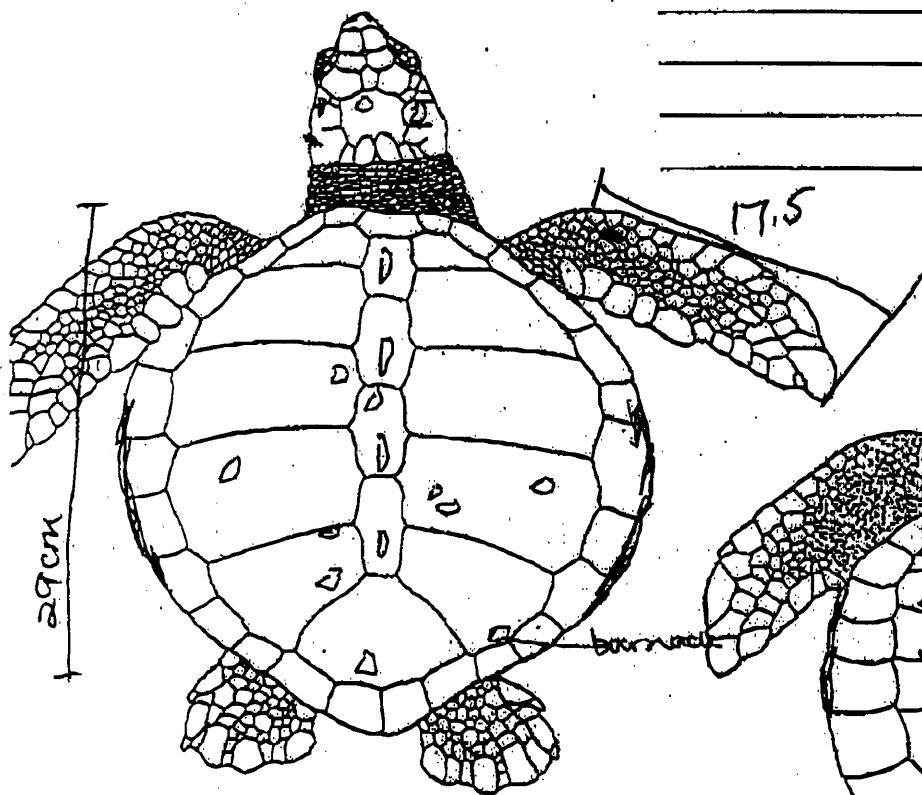
Observer's Name Kirsten Dahler and Alison Zanardi

# *Lepidochelys kempii* (Kemp's Ridley)

Shade areas of turtle that are missing. Sketch cracks and lacerations.



Comments: Entire turtle recovered with mild abrasions on head, carapace, plastron and edge of marginal scutes. Some bleeding evident in soft tissue of neck + flippers. Markings on diagram indicate abrasions. One small bite mark present on right posterior costal scute. (Load 465.



Diagrams by Tom McFarland